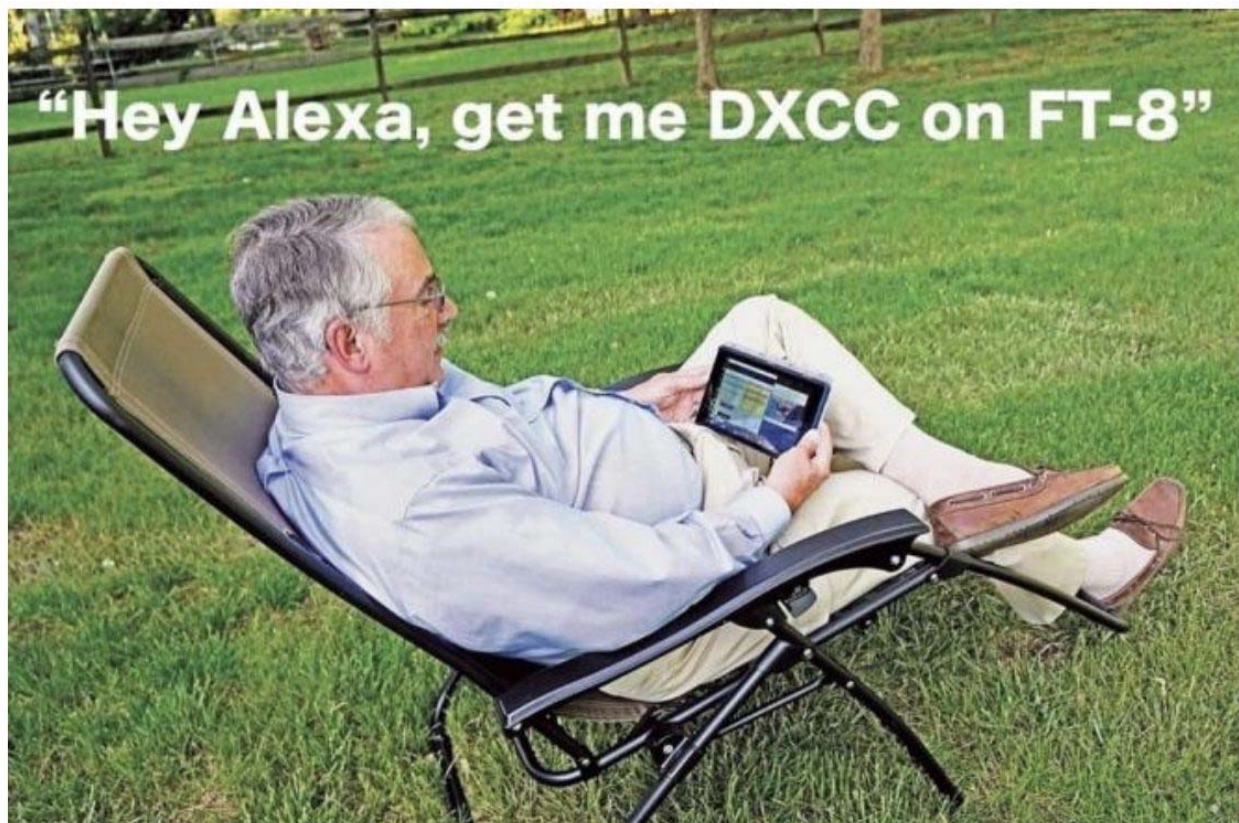




Next Meeting

12.00pm Sunday 13th March

Due to risk of COVID-19 outbreaks details will be emailed to members closer to the date



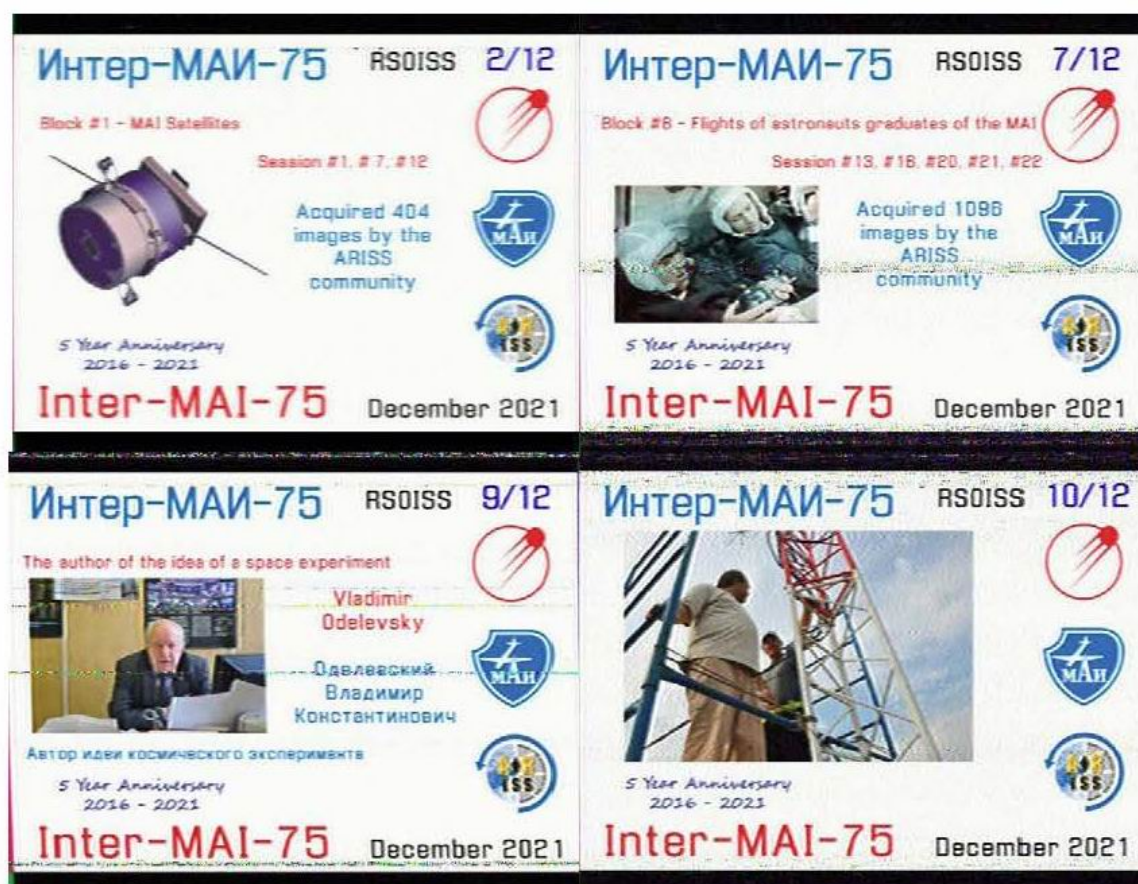
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SSTV IMAGES FROM THE INTERNATIONAL SPACE STATION

By Frank Scott VK2BFC

As some may be aware I am somewhat of an SSTV enthusiast, as such it's always been an interest of mine to receive SSTV images from the International Space Station (ISS). The ISS regularly transmit SSTV images during missions generally over a 2-day period, the last being on the 1st and 2nd of December 2021.

During this pass I was fortunate enough to receive a number of images using a very basic setup. An FT-818, Signalink USB Sound card interface, J-Pole antenna, and a windows PC was all it took to receive images using the MMSSTV SSTV Software.



Slow Scan Television (SSTV) is transmitted by the [ARISS Russia Team](http://www.spaceflightsoftware.com/ARISS_SSTV/) from the amateur radio station in the Russian Service Module of the International Space Station using the callsign RSOISS. The equipment used is a Kenwood D710 transceiver running about 25 watts output which provides a very strong signal enabling reception using simple equipment.

In the past twelve different images were sent on 145.800 MHz FM using the SSTV mode PD180, with a 3-minute off time between each image. This has now changed to use the faster **PD120** mode with a 2 minute off-time which will allow more images to be received in an orbital pass.

The images received by amateurs world-wide during previous transmissions can be seen at http://www.spaceflightsoftware.com/ARISS_SSTV/ and you are invited to upload any pictures you receive during the upcoming transmissions.

All you need to do to receive SSTV pictures direct from the space station is to connect the audio output of a scanner or amateur radio transceiver via a simple interface to the

soundcard on a Windows PC or mobile device, and tune in to 145.800 MHz FM. You can even receive pictures by holding a mobile phone next to the radio loudspeaker.

On Windows PC's the free application [MMSSTV](#) can be used to decode the signal, on Apple iOS devices you can use the [SSTV app](#) for compatible modes. For Linux systems try [QSSTV](#). The ISS puts out a strong signal on 145.800 MHz FM and a 2m handheld with a 1/4 wave antenna will be enough to receive it. The FM transmission uses 5 kHz deviation which is standard in much of the world. Many FM rigs can be switched between wide and narrow deviation FM filters. For best results you should select the filter for wider deviation FM. Handhelds all seem to have a single wide filter fitted as standard.

During most of a pass the ISS may be more than 15 degrees above the horizon so an antenna with a high radiation angle will give better results. Simple antennas such as an outdoor 1/4 wave ground plane or dipole should give good results. Large 2m colinear antennas don't work quite as well because their radiation pattern is concentrated at the horizon.

Paul Turner G4IJE, co-developer of the SSTV PD modes, says regarding the [MMSSTV](#) PD180 mode: "Don't forget to either enable "Always show RX viewer" or use the "Picture viewer" (magnifying glass icon) to show the picture at its real resolution of 640 x 496. If you just view as normal you will only see 320 x 248 resolution, which kind of defeats the object of using a high-resolution mode."

On the AMSAT-BB Rick W2JAZ and Alan WA4SCA comment on the need to set the MMSSTV sound card setting to 48 kHz instead of the default 44.100 kHz

- Options
- Setup
- Misc
- Then the Clock section at the bottom of the page

The MMSSTV default setting may need to be set to 24000 (exactly half of the sound card setting). You then should get good clean images.

The sound card adjustments will vary slightly depending on the version of the OS you are running, but usually will be under the advanced properties for the device. You can probably use a higher sampling rate for the sound card so long as it is a power of 2 multiple (2,4,8, etc) of the value in MMSSTV. For instance, 192k (8x) has no issues. The same applies to most similar software.

Useful Links for ISS SSTV Reception Information

ISS Tracking / Predictions <https://amsat-uk.org/beginners/satellite-tracking/>

Free MMSSTV Slow Scan TV software <http://hamsoft.ca/pages/mmsstv.php>

iOS SSTV App <https://itunes.apple.com/gb/app/sstv/id387910013>

Linux QSSTV Linux QSSTV <https://sourceforge.net/projects/qsstv/>

Please note that SSTV events are dependent on other activities, schedules and crew responsibilities on the ISS and subject to change at any time. You can check for updates regarding planned operation at:

ISS Ham <https://twitter.com/RF2Space>

ARISS Status https://twitter.com/ARISS_status

ARISS SSTV Blog <https://ariss-sstv.blogspot.com/>

AMSAT Bulletin Board <http://www.amsat.org/mailman/listinfo/amsat-bb>

You can see SSTV images received from the ISS and upload your images at the ARISS SSTV Gallery http://www.spaceflightsoftware.com/ARISS_SSTV/

~Frank Scott VK2BFC

17 Technology Quotes That Backfired Badly

It's never fun to be proven wrong. Making a bold statement whether something is going to happen or not can set you up to be a visionary, but only if it comes true. If it goes horribly wrong though, it has the potential to haunt you for the rest of your life.

It can be especially damaging if you happen to be in a position of authority or a supposed expert in your field. And in the field of technology there have been several instances of high ranking figures claiming some new invention will flop or underestimating the impact of the supposed next big thing.

Here are 17 technology quotes that backfired badly.

1) 1876: "The Americans have need of the telephone, but we do not. We have plenty of messenger boys." William Preece, British Post Office (After several evolutions, the introduction of the teletype in 1892 effectively ended the need for messenger boys).

2) 1876: "This 'telephone' has too many shortcomings to be seriously considered as a means of communication." William Orton, President of Western Union (Today there are estimated to be over 9 billion mobile phones in circulation, more than the number of people in the world).

3) 1889: "Fooling around with alternating current (AC) is just a waste of time. Nobody will use it, ever." Thomas Edison (Following the 'war of the currents' of the 1880's with George Westinghouse, AC is now used worldwide).

4) 1903: "The horse is here to stay but the automobile is only a novelty, a fad." President of the Michigan Savings Bank advising Henry Ford's lawyer, Horace Rackham, not to invest in the Ford Motor Company (Today there are estimated to be a billion cars on the roads around the world).

5) 1943: "I think there is a world market for maybe five computers." Thomas Watson, chairman of IBM (Today there are estimated to be two billion computers in use around the world).

6) 1946: "Television won't be able to hold on to any market it captures after the first six months. People will soon get tired of staring at a plywood box every night." Darryl Zanuck, 20th Century Fox (Today there is estimated to be at least one television set in 1.4 billion households around the world).

7) 1955: "Nuclear powered vacuum cleaners will probably be a reality within 10 years." Alex Lewyt, President of the Lewyt Vacuum Cleaner Company (While the product has

become a reality, it is not used by many due to the dangers of nuclear power, highlighted by the Chernobyl disaster of 1986).

8) 1959: "Before man reaches the moon, your mail will be delivered within hours from New York to Australia by guided missiles. We stand on the threshold of rocket mail." Arthur Summerfield, U.S. Postmaster General (Man landed on the moon in 1969, while rocket mail has still to become a reality).

9) 1966: "Remote shopping, while entirely feasible, will flop." Time Magazine (Amazon online has reached over \$200 billion turnover over the last several years).

10) 1981: "Cellular phones will absolutely not replace local wire systems." Marty Cooper, inventor (There are estimated to be just over a billion landlines worldwide compared to 9 billion mobile phones).

11) 1995: "I predict the Internet will soon go spectacularly supernova and in 1996 catastrophically collapse." Robert Metcalfe, founder of 3Com (In 2019 an estimated 4.13 billion people have regular internet access).

12) 1996: "Apple is a chaotic mess without a strategic vision and certainly no future."- TIME Magazine (As of 2019, Apple's net worth has been sitting around \$940 billion).

13) 1997: "I'd shut Apple down and give the money back to the shareholders."- Michael Dell, founder and CEO of Dell, Inc. (As of early 2020, Apple's share price is over \$300).

14) 2004: "Two years from now, spam will be solved." Bill Gates (Today 90% of all emails sent are categorised as spam).

15) 2005: "There's just not that many videos I want to watch." Steve Chen, CTO and co-founder of YouTube expressing concerns about his company's long term viability (The total number of hours of video watched on YouTube each month is estimated to be approx. 3.25 billion).

16) 2006: "Everyone's always asking me when Apple will come out with a cell phone. My answer is, 'Probably never.'" David Pogue, The New York Times (The first iPhone was released in 2007 and since then over 2.2 billion handsets have been sold worldwide).

17) 2007: "There's no chance that the iPhone is going to get any significant market share." Steve Ballmer, Microsoft CEO (Approx. more than 40% of mobile phone handsets are believed to be iPhones).

~Internet

The Ongoing 160 Meter Portable Quest

The problems of the VK3CH Australia Day 160 Meter Portable attempt were due to a fault in the AH-4 Auto Tuner connector plug. After cleaning the pins connecting to the AH-4 ATU it was all good.

An antenna on the car was tuned by the AH-4 ATU to all bands except 160 meters.

An ohm meter confirmed all coax connections were sound and no shorts.

So the squid pole antenna itself was not the culprit.

Further to my attempted Australia Day 160 Meter Portable, I got this reply from Steve VK3HK, one of the Melbourne 160 Meters Coffee Break AM Net crew.

Oh dear, what a learning curve you are on!

However... If you ask any of the Coffee break gang what their first 6 months [or more] were like on 160 metres you will hear a story of woe and exasperation in line with what you are going through so please, do not feel that you are alone in feeling frustrated.

Here follow some tips on 160 metre operation which if followed will bring you up out of the noise.

Keep in mind that I have had 40 years experience on this band and have worked all over the world on it.

Everything that follows will be backed up by Drew and Laurie...

1. *For local operating you MUST put out a vertically polarised signal.*

This means using a vertical antenna such as a squid pole suspended wire, an inverted L, a Marconi T or a top loaded short vertical such as Drew's design which you appear to have used in 2012.

2. *You must get current flowing in the vertical section of your antenna*

If you base load the antenna you'll get hardly any current flowing up the stick so 'top loading' is the way to go. Your idea of wires on the top of the squid pole was great but they need to be much longer to form a capacitive hat and used in conjunction with inductive loading.

Another idea is to erect your Squid pole and attach a wire [insulated at the far end] to the top and take that off to a tree or a 'power tower' so forming an inverted L.

Or just use a quarter wave of wire and chuck it up a tree as high as you can get it. It won't matter too much if it has a slope to it.

3. *You MUST operate using at least one counterpoise wire. More wires are better.*

*This wire **DOES NOT** need to be a quarter wave, whole wave or any other wavelength long.*

It should be as long as your antenna is high !

The orientation of the counterpoise will have little or no influence on the radiation pattern of your signal.

4. *25 watts of AM on 160 metres was great 20 and more years ago but given the noise floor these days and the geographical spread of stations, 100 watts is what you really need.*

5. *Please do not hesitate to ask questions but to get reliable answers, I suggest you direct them to Drew, Laurie or myself.*

73,

Steve.

VK3HK

WHAT VK3CH IS DOING WITH PORTABLE OPERATION, WITH VK3HK SUGGESTIONS

For item 1, Yes, I always use Vertical polarization for 160 meters for local operation, that is the only way.

For item 2, Yes, Top Loading is used at home. But it is a challenge to have a coil on top of a top end thin sections of a squid pole. The capacity hat wires on the squid pole can always be extended from the current 3 meters in length; this will be done in future.

At home the capacity hat wires are currently 3 meters length, I will increase the length, but this will involve taking the Top Loaded Vertical down, a major project on my own, but maybe the XYL will help out. But Drew VK3XU Top Loaded Vertical design quoted 3 to 4 meters length of capacity hat wire lengths.

For item 3, at home I use two 40 meter counterpoise wires along the property fence on the ground.

The house is on a quarter acre block so the property fence run is quite a good length.

For portable I have three meter counterpoise wires on the ground as close to 120 degrees apart as I can get.

For item 4, 25 watts is all I have access to. I would love more power but don't have the cash or workshop to build a dedicated 100 watt AM Transmitter, nor can I afford an RF Linear Amplifier. I will just have to improve the antenna side of things.

For item 5, I am always happy to listen to words of wisdom and publish them in this newsletter.

A NEW VK3CH DESIGN FOR A LIGHTWEIGHT PORTABLE 160 METER ANTENNA

My Super Rod Antenna is OK and I don't want to modify it or hack into it.

I have another plain 10 meter squid pole so I decided I would modify that instead.

The thin bits on the end are too weak to hold loading coils so I dispensed with the top three sections.

This still gives a squid pole length of just over six meters height.

They are all tapered and the top section I kept has a diameter of 20mm one end and 23mm the other end.

I considered this to be tough enough to support a top loading coil, but instead of a big former placed on the squid pole section, the coil would be wound straight onto the section itself.

To give 'top loading' I was going to wind as much turns of enamelled 0.5mm copper wire as would fit.

This is about 700mm top loading coil form length, to be close wound. A space of 150mm one end was kept free so the other section can slot inside. The section with the coil will not be able to be retracted so it will remain extended. The coil would stop about 200mm before the top and the end wire of the coil extends to the end of the section. This coil top end wire then joins to the capacity hat radials and a water proofing cap is glued to the end. No idea if this was going to work, or most optimal solution, only way to find out is build it.

CONSTRUCTION BEGINS

First job was remove the top three sections of the 10 meter squid pole.

The section seen on the bottom of the photo is the section the Top Loading Coil is to be wound on.



I asked Steve VK3HK his thoughts on my proposed project.

His reply was *“Winding a coil on a narrow form will require a huge number of turns and when you had finished winding you would end up with something closely resembling a helically wound mobile whip on the top of your pole. And the result will be pretty narrow band.”*

So I decided to use a 50mm former placed through the top section of the squid pole.

All this required a workshop to be done properly.

I found a Single layer air core inductor calculator online and plugged in values for 118µH.

The calculation is based on the classic Wheeler's formula for single-layer inductance (air core, tightly wound), which dates back to the radio days of the 1920s:

$$L = 0.001N^2D / ((228D/2) + 254l)$$

Where:

L is the inductance in henry's.

D is the coil diameter in meters.

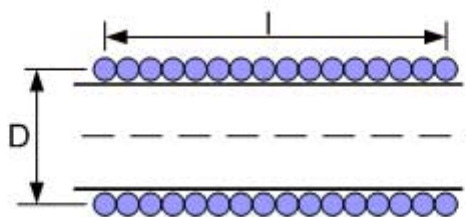
l is the coil length in meters (>0.8radius)

N is the number of turns.

The diameter is measured from center of wire trough center of the coil and to center of the wire on the opposite side.

This formula applies at 'low' frequencies (<3MHz) using enameled copper wire (magnet wire) tightly wound.

Small reductions in the inductance obtained can be achieved by pulling the turns apart slightly. This will also reduce self-resonance. Other combinations of wire and coil diameter may be tried but best results are usually obtained when the length of the coil is the same as its diameter. If you need good induction stability in the presence of vibration then wind the coil on a support made from a suitable non magnetic plastic or ceramic former and lock the windings using epoxy glue or other suitable adhesive.



Required Inductance (L):	<input type="text" value="118"/>	<input type="text" value="uH"/>
Coil Diameter (D):	<input type="text" value="50"/>	<input type="text" value="mm"/>
Wire Diameter (d):	<input type="text" value="0.5"/>	<input type="text" value="mm"/>
Coil Length (l):	<input type="text" value="23.4"/>	<input type="text" value="mm"/>
Number of Turns (N):	<input type="text" value="46.9"/>	

A DAY IN A REAL WORKSHOP

I got so involved with the lathe that I forgot to take any photos.

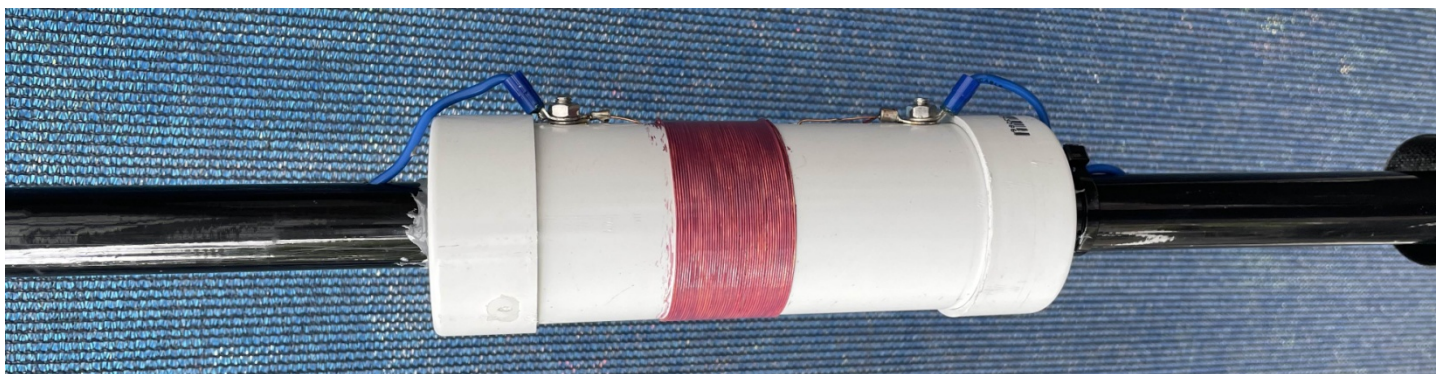
The 47 turns top loading coil was wound using the lathe on a low spin rate, so much faster than by hand.

A few holes were drilled into the squid pole for the internal wire, the fibreglass tube did not crack or split.

Everything was done in about an hour.



Nail polish to hold the coil



The 50mm coil former with ends to the squid pole bonded with JB Weld glue



The top end of the squid pole with the three capacity hat plug sockets

An internal wire runs down to the top of the loading coil

This way nothing gets tangled, capacity hat wires added one by one and run out with their twine leads each



Comparison height of a Drew VK3XU Top Loaded Aluminium Vertical with the Top Loaded Squid Pole
The top three squid pole sections were not used as I considered them too thin and flimsy to drill and work with

Both Top Loaded Coils are 118 μH

Photo taken by Glenys, XYL

The new squid pole was a bit thicker than the other Electric Bug squid pole so a larger PVC base was required. The base plate with the attachments was kept, with a change over of PVC pipe to support the new squid pole. Instead of a screw to attach all the ground radials each one was allocated a banana socket instead. No more screws to drop in the grass now.



The revised base with six earth banana sockets

The new squid pole is a bit larger so a 65mm PVC pipe was swapped over to the base

NIGHTMARES TO WARN ME

The day before the workshop visit I dreamt that I had done the coil perfectly and the three capacity hat sockets as well but forgot to run the squidpole sections through the other sections first. As they are all a tapered fit there was no way to attach the other sections, a wasted project – so I remembered my dream warning and had the squid pole sections slipped all through, prior to any installation works and glue sessions.

This time everything went to plan, just as I designed it, now to see if it works.

PORTABLE FIELD TEST

On a milder weather day I returned to the same portable location I used on Australia Day so a comparison to home QTH can be done.

Being six meters high and thicker sections the modified squid pole does not shake as much fully extended compared to the other 'Electric Bug' squid pole.

The idea of attaching the capacity hat wires only when vertical saves the wires tangling up during storage.

The new capacity hat wires were increased from three to four meters length and now are slightly thicker wire.

I arrived at 9.30am and by 10.20am everything was setup.

All six counterpoise radials, both the three 20 meter lengths and the three 40 meter lengths were connected.

An ohm meter confirmed continuity from the antenna centre pin to the capacity hat radials, all good.

THE RESULTS

The AH-4 ATU refused to tune 160 meters at all, but would tune all other bands to the squid pole.

Also lots of Meduin Wave AM broadcast station birdies were across 160 meters with one right on 1825 kHz.

I traced the main birdie as broadcast radio station 1503 kHz.

Later I found out their transmitter tower is in Lower Plenty, 5.7km away, no wonder it is swamping the band.

I took a listen to Ron's Net on 7.100 MHz and heard Ron and many stations all across the state very good copy.

As I was trying to get 160 meters going I did not call in.

From 10.30am I could make out stations testing on 160 meters but the broadcast stations wiped them out.

I decided to use the 20dB attenuator cut on the IC-7100 and that made all the difference.

The birdies dropped to S0 but still could be weakly heard.

But the amateur stations on the 160 Meter AM Coffee Break Net could now be heard, even Laurie on S0 but a clear voice copy.

VK3ARY S3, VK3ART S1, VK3AKG S4, VK3SJ S0, VK3AHM S3, VK3HK S1, VK3XU S3

So another unsuccessful portable transmit attempt in the hot sun with the flies.

To get the AH-4 to tune the squid pole the only option left was to have a small coil at the base of the squid pole to make the AH-4 see a longer electrical length and hopefully tune it in. Any coil at the base will mean losses.



S20+ broadcast station interference before the 20 dB cut was applied



The new top loaded squid pole under test, but the AH-4 refused to tune it on 160 meters
I was worried the top banana plugs might slip out with the capacity hats wires tensioned, but they stayed in

AUTO TUNER COMPARISONS

The car has the AH-4 to try and match the squid pole when portable.

ICOM quote the AH-4 Frequency matching range as 3.5 MHz –54 MHz (with an antenna longer than 7 meters; 23 feet) or a matching range of 7 MHz –54 MHz (with the AH-2b) So ICOM say the AH-4 does not cover 160 meters, but I have done it before on 160 meters, with a base loading coil.

My Top Loaded Aluminium Vertical at home is matched via a HC-200AT ATU.

The HC-200AT specs says;

HC-200AT is a compact 200W HF/6m auto antenna tuner.

It works with any radio having a frequency coverage of 1.8MHz~54MHz, and power output of 2-200W.

With a wire antenna of 7.5meters (25 feet) or longer, the tuner will tune from 3.5MHz through 54MHz.

For 1.8MHz (160M), a minimum length wire of 30meters (95 feet) is recommended

But I also have a SG-237 Smart Tuner.

SG-237 Specifications HF Frequency Range: 1.8-60 MHz

Antenna Length (>3.3 MHz): 8 feet (2.5 Meters) minimum

Antenna Length (<3.3 MHz): 28 feet (8.5 Meters) minimum

Auto Tuner Type	Minimum conductor length to tune 160 Meters
ICOM AH-4	Not Possible - according to the specifications
Tokyo HC-200AT	30 meters length
SGC SG-237 Smart Tuner	8.5 meters length

The idea of swapping over the AH-4 for the SG-237 Smart Tuner was looking like the best option.



INSTALLING THE SG-237 SMART TUNER

I have boxes full of screws, washers, nuts, wire, brackets, all sorts of stuff, but never the stuff I need. One item I did not find was another S0-239 socket, so a trip to a fellow hams house had one offered to me. Yet another trip to Bunnings for more screws, this time the right size and length for tuner modifications.



SG-237 Smart Tuner with S0-239 socket added

TESTING - FAILURE

With the SG-237 Smart Tuner installed testing had any / every band tuned in on the squid pole, well so I thought. On transmitting the VSWR was sky high on any and every band.

A band would be selected and tuned and the radio says matched, but upon trasmitting the VSWR was crap. Perhaps the SG-237 Smart Tuner is getting RF into it and going nuts, but it is operating in an RF environment. So the outcome was far worse than with the AH-4 and no other ATU I own gives a match on 160 meters.

On 40 meters as a vertical it works very well, but when 40 meters is open you can use just about anything, the good thing is it needs less space than an inverted "V".

The only way out it seems is to use a base coil to make the auto tuner happy.

It will need at least 30 meters in line to add to the electrical length of the squid pole wire.

Jaycar have 0.63mm Enamel Copper Wire spool of 36 meters length.

A base coil with an entire reel of that wound over a 90mm former might do the job, only way is to wind it and find out what the performance is and if the auto tuner will match it. I have done similar before.

Calculations give a circumference of 282.74 mm for a former of 90mm diameter.

36 meters of 0.63mm wire will be taken up with 127 turns on the 90mm PVC former.

127 turns of 0.63mm wire will make a wound length of 80mm.

I counted my finished coil as 135 turns once wound.

MEASUREMENTS FOR A BOTTON LOADING COIL TO TRICK THE AUTO TUNER

I have used a bottom coil to trick the auto tuner before to match 160 meters, but of course this comes at a cost of reduced current on the vertical and hence less radiated power. Measurements were made and the PVC pipe would need to be 620mm long. This may be too long to support the weight of the squid pole on top without bending. But the capacity hat wires should act as sufficient guy wires for support.

160 Meter Squid Pole - Lower Coil Design PVC Mast

10	Squid Pole Base	10
20	Squid Pole Base	20
30	Squid Pole Base	30
40	Squid Pole Base	40
50	Squid Pole Base	50
60	Squid Pole Base	60
70	Squid Pole Base	70
80	Squid Pole Base	80
90	Squid Pole Base	90
100	Squid Pole Base	100
110	Squid Pole Base	110
120	Squid Pole Base	120
130	Squid Pole Base	130
140	Squid Pole Base	140
150	Squid Pole Base	150
160	Squid Pole Base	160
170	Squid Pole Base	170
180	Squid Pole Base	180
190	Squid Pole Base	190
200	Squid Pole Base	200
210	Squid Pole Base	210
220	Squid Pole Base	220
230	Squid Pole Base	230
240	Squid Pole Base	240
250	Squid Pole Base	250
260	Squid Pole Base	260
270	Squid Pole Base	270
280	Squid Pole Base	280
10	SPACE	290
20	SPACE	300
30	SPACE	310
40	SPACE	320
50	SPACE	330
10	COIL	340
20	COIL	350
30	COIL	360
40	COIL	370
50	COIL	380
60	COIL	390
70	COIL	400
80	COIL	410
90	COIL	420
100	COIL	430
110	COIL	440
120	COIL	450
130	COIL	460
140	COIL	470
10	SPACE	480
20	SPACE	490
30	SPACE	500
40	SPACE	510
50	SPACE	520
10	BRACKET	530
20	BRACKET	540
30	BRACKET	550
40	BRACKET	560
50	BRACKET	570
60	BRACKET	580
70	BRACKET	590
80	BRACKET	600
90	BRACKET	610
100	BRACKET	620

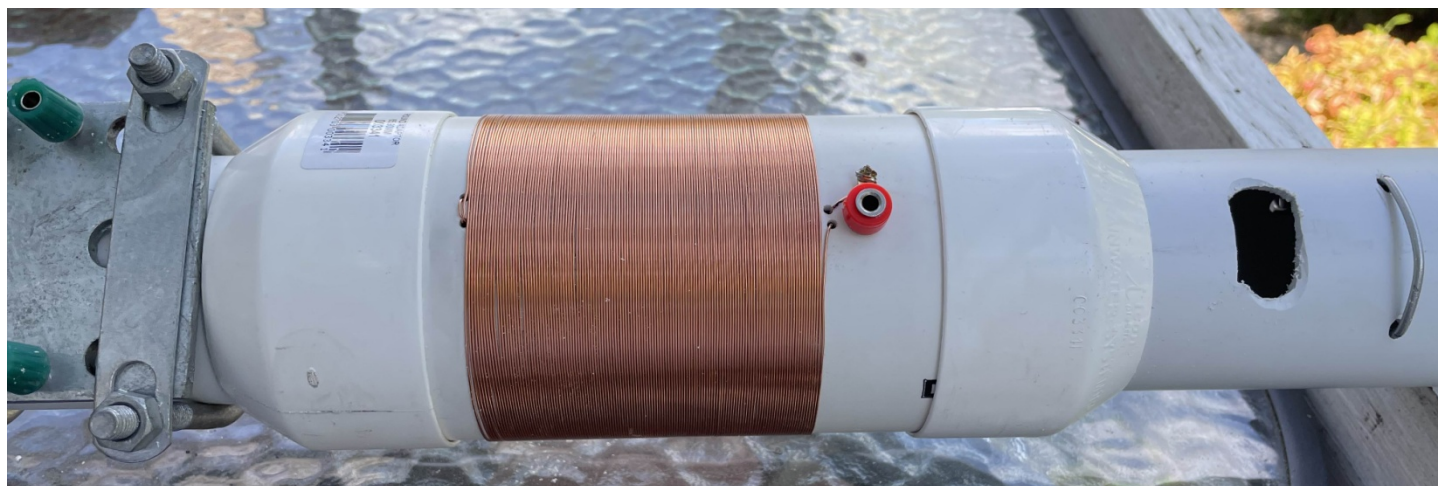
ANOTHER WORKSHOP VISIT

At Bunnings I found PVC pipe size 65mm to 90mm changing adapters, very handy.

Two of these were used to add a coil wound on 90mm PVC pipe, then slipped over the new 65mm PVC pipe.

Winding on the lathe is so much faster than by hand.

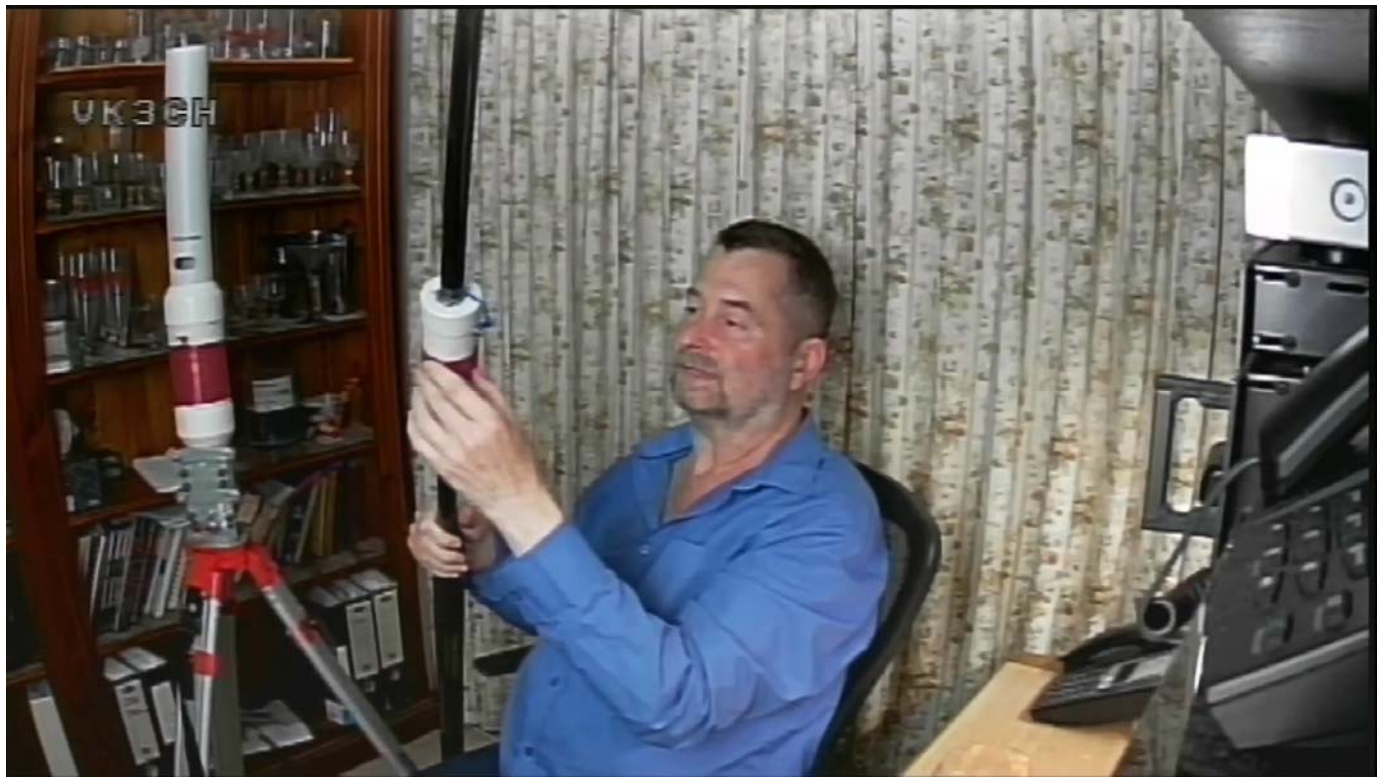
Once again I focused on the job and forgot to take photos using the lathe.



Finished bottom loading coil before fingernail polish applied, left side soldered to S0-239 connector, right side takes the antenna wire bannana jack. The hole is to be able to reach the internal antenna wire plug to the coil. Coathanger wire holds the squid pole base from sliding down the pipe, so the lead wire is just above the hole.



Bottom coil wire soldered direct to coax socket



Show and tell on the weekly VK3RTV Amateur Radio Television Tuesday Night Net with the 160 meter squid pole demonstration on a hot night with the ceiling fan spinning in the room – what could possibly go wrong...

FIRST TESTING WITH LOADING COIL – ANOTHER FAIL BEFORE IT EVEN BEGAN

After two failed attempts I hoped the tuner would match the squid pole on 160 meters with the new base loading coil. The AH-4 tuner is the main auto tuner in the car so it was hoped that the AH-4 would be able to match despite the specifications saying otherwise.

As a comparison the home radio with the house top loaded vertical gets into Pauls SDR at Croydon on S5 but my voice was way down in the noise which is the usual copy the SDR gets me on from home. The idea was to listen to myself on the SDR on my iphone and see how well the portable squid pole performs.

The squid pole was erected and before I could catch it the wind blew it over and it partly broke a section.



This was after running out all the cables, so I had to reel them all up again, another hour wasted. The only way to fix it is to let the broken part slide down to the next level and glue it. But this will reduce the length which will make more effort required of the auto tuner to place it into tune. This whole project has gone from enjoyment to just pissing me off and wasting money.

REPAIRS TO SQUID POLE

JB Weld glue to the rescue, the cracked section slipped into the larger section next to it to bind it, but at a cost of overlapping the two sections with 0.6 meter height lost.

The squid pole when collapsed is a bit longer but will still (just) fit in the car for transport.

This means my former triangle maths calculations for knowing where to put the pegs to support the capacity hat guys need recalculating.

TESTING WITH LOADING COIL – TAKE #2

With another cooler day time to try another test, this time with the squid pole preguyed to stop any fall damage. The former distance for the support pegs were used, the pole was wobbly but prevented from falling and the pegs were adjusted in turn so the capacity hat wires were spread without being too tight. Setting up takes about 40 minutes, with the three 40 meter ground radials the longest walk of the job. When I did the first test I discovered bannana plugs were yet to be put on the cables ends instead of the lugs, but found out the wire was too thick to attach banna plugs so the bare copper wire was soldered in a U shape to fit the screw terminals.

Also with the loss of 0.6 meters length the inner squid pole plug wire to the loading coil was cut back to fit.

THE RESULTS

While setting the antenna up at my usual site I got told off by one of the persons that use the hall on the property at a discounted rate. The irony being is I am the volunteer property manager of the site, so I figured I was allowed to be there, but never mind, I was not there for long.

As expected the bottom loading coil sucked most of the RF energy and I could not hear my signal at all on Paul's SDR at Croydon. I was S5 last test, but now with the bottom loading coil, now S0, nothing heard at all. So the bottom loading coil has to go.

The only solution I see now is to go back to the first arrangement with no bottom loading coil and use a roller inductor and variable capacitor gang tuner to match the vertical – keep it simple.

A roller inductor can be found at hamfests but they seem to be few and far between or expensive if they are of good quality.

But I am in no rush, so you wont see me portable on 160 meters for a while.

Just yesterday one of the three guys on my home 160 meter vertical came out of the tree stump that had now rotted, fortunatly the XYL found it before the whole the vertical got blown over by the wind.

That would have broken the insulated base as well.

160 meters is giving me lots of grief at the moment.

~Mick VK3CH

John Moyle Memorial Field Day

The JMMFD contest Starts 0100 GMT on the 19th of March and concludes 0059 GMT on the 20th of March

We have the radios and antennas, what the club needs is operators for each band
Portable location will be at Mount Pilot, site of NEVARC first 2019 JMFD expedition
Contact our club Secretary Frank VK2BFC secretary@nevarc.org.au to join the portable crew

<https://www.wia.org.au/members/contests/johnmoyle/>

Aim Of The Contest

The aim is to encourage and provide familiarization with portable and field operation, and provide training for emergency situations. The rules are therefore specifically designed and focused to encourage field operations.

This contest is a **Field Day Contest** and not another contest where very powerful home stations operate under one call to amass huge scores,

Contest History

The contest is run each year in memory of the late John Moyle who was a long term editor of the Wireless Weekly, (later Radio & Hobbies - later Radio Television & Hobbies) from 1947 until his untimely death in 1960.

He served in the RAAF with distinction and was responsible for a number of innovative solutions to keeping radio and radar equipment working under difficult wartime and working conditions.

The WIA decided that a suitable long term memorial to John Moyle would be a Field Day with a focus on portable or field operation. The contest has been conducted annually ever since.

The rules of the contest have gradually changed over time and are still revised regularly.

The contest is still for portable or field operators, though Home stations can of course take part using a different scoring system.

Though Multiple Operators and club stations are actively encouraged to take part in the contest they are not competing against the single operator stations and in effect there are two separate contests run at the same time. Hence single operator stations take part in their own contest against other single operators.



John Moyle Field Day Bands

Frequencies are not set in stone but a good start

6M 50.150 USB or 52.525 FM

2M 144.150 USB or 146.500 FM

70cm 432.150 USB or 439.000 FM

23cm 1296.150 USB or FM

13cm 2403.150 USB

9cm 3398.150 USB

3cm 10,368.150 USB





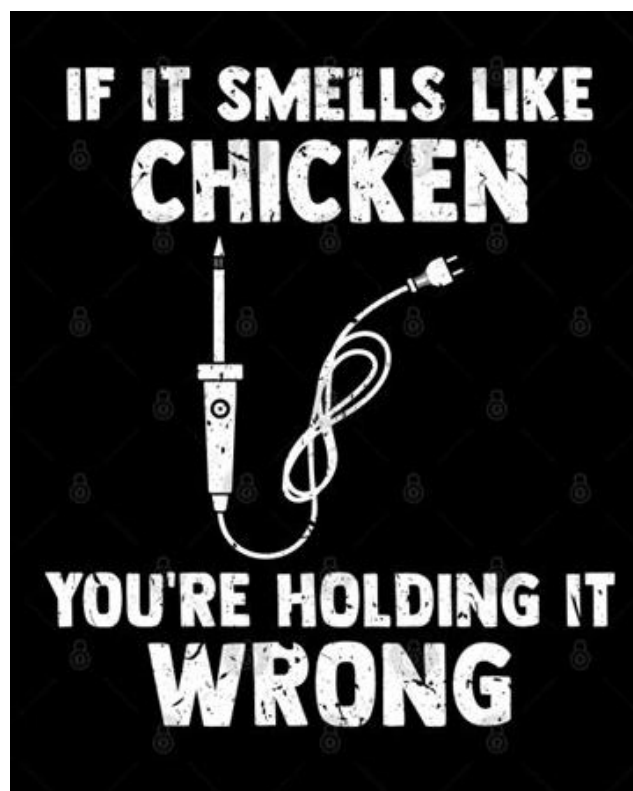
"On FT8, no one knows you're a dog."



SOTA Users Guide

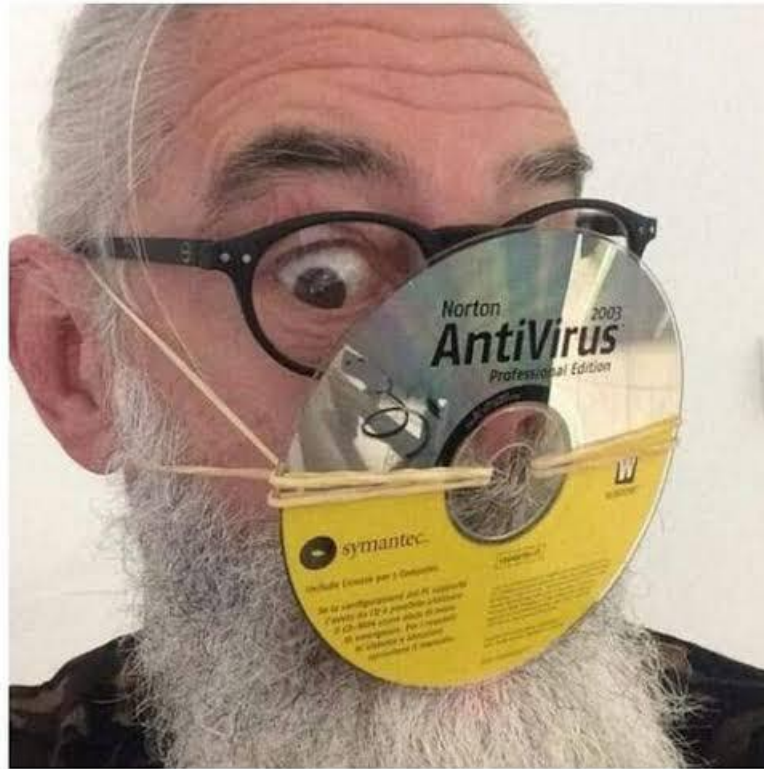


"So then he says, 'Let me show you my logbook.' It was all FT8!"



I fell off a 40 ft ladder once....
Lucky for me I was on the bottom rung.

Problem solved.



Winter Beam Umbrella





I thought Bunnings only sold plants, not weed

KIDS TODAY
WANT THE
LATEST
iPHONE



I REMEMBER
WANTING
THIS PEN

NEVARC News
The club magazine

All it needs is YOU

Send stories of your radio news to the editor

What have you been up to in these strange days of COVID?

magazine@nevarc.org.au

Australia Ham Radio 40 Meter Net



7 Days a Week
10am Local time
(East coast)

7.100 MHz LSB

Approximately + or – QRM

Hosted by Ron VK3AHR

NEVARC WEDNESDAY NIGHT NETS

2 Meter Net Check-in Wednesday 8pm Net Control VK3ANE

VK3RWO 146.975 600 kHz, 123 Hz tone

VK3RWC 147.325 -1600 kHz, 123 Hz tone

Can also dial in via VKLink repeaters to
Node 1301,

Allstarlink node 42124,

Or for those with a hamshack hotline or
SIP phone, you can get a VKLink
extension number and dial 1301 as well

President, VK3VS, Matt
Vice President, VK2VU, Gary
Secretary, VK2BFC, Frank
Treasurer, Amy Bilston



NEVARC CLUB PROFILE

History

The North East Victoria Amateur Radio Club (NEVARC) formed in 2014.

As of the 7th August 2014, Incorporated, Registered Incorporation number A0061589C.

NEVARC is an affiliated club of the Wireless Institute of Australia and The Radio Amateur Society of Australia Inc.

Meetings

Meetings details are on the club website, the Second Sunday of every month, check for latest scheduled details.

Meetings held at the Belviour Guides Hall, 6 Silva Drive West Wodonga.

Meetings commence with a BBQ (with a donation tin for meat) at 12pm with meeting afterwards.

Members are encouraged to turn up a little earlier for clubroom maintenance.

Call in Via VK3RWO, 146.975, 123 Hz tone.

NEVARC NETS

HF

7.100 MHz 7 Days a Week - 10am Local time

VHF

VK2RWD Wednesday - 8.00pm Local time VK2RWD & VK3RWO & VK3RWC are linked

Benefits

To provide the opportunity for Amateur Radio Operators and Short Wave Listeners to enhance their hobby through interaction with other Amateur Radio Operators and Short Wave Listeners. Free technology and related presentations, sponsored construction activities, discounted (and sometimes free) equipment, network of likeminded radio and electronics enthusiasts. Excellent club facilities and environment, ample car parking.

Website: www.nevarc.org.au

Postal:

NEVARC Secretary
PO Box 8006
Birallee Park
Wodonga Vic 3690

Facebook: www.facebook.com/nevicARC/



All editors' comments and other opinions in submitted articles may not always represent the opinions of the committee or the members of NEVARC, but published in spirit, to promote interest and active discussion on club activities and the promotion of Amateur Radio.

Contributions to NEVARC News are always welcome from members.

Email attachments of Word™, Plain Text, Excel™, PDF™ and JPG are all acceptable.

You can post material to the Post Office Box address at the top of this page, or email magazine@nevarc.org.au

Please include a stamped self-addressed envelope if you require your submission notes returned.

Email attachments not to exceed 5 Mb in file size. If you have more than 5 Mb, then send it split, in several emails to us.

Attachments of (or thought to be) executable code or virulently affected emails will not be opened.

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Other articles credited to outside sources should ask for their permission if they are used.

While we strive to be accurate, no responsibility taken for errors, omissions, or other perceived deficiencies, in respect of information contained in technical or other articles.

Any dates, times and locations given for upcoming events please check with a reliable source closer to the event.

This is particularly true for pre-planned outdoor activities affected by adverse weather etc.

The club website <http://nevarc.org.au> has current information on planned events and scheduled meeting dates.

You can get the WIA News sent to your inbox each week by simply clicking a link and entering your email address found at www.wia.org.au. The links for either text email or MP3 voice files are there as well as Podcasts and Twitter. This WIA service is FREE.